SYSTEMATIC APPROACHES TO A SUCCESSFUL LITERATURE REVIEW

SECOND EDITION

ANDREW BOOTH
ANTHEA SUTTON
AND DIANA PAPAIOANNOU
2 TAKING A SYSTEMATIC APPROACH TO YOUR LITERATURE REVIEW

in a nutshell

Why be systematic?

- The ‘literature review’ has a long pedigree as an area of academic and research endeavour. However, review methods can now fulfil an even greater variety of purposes and answer a greater range of question types.
- Reviewing the literature in a systematic way helps the author to be clear, to build confidence in their work and demonstrate the rigour of their methods.
- Recent years have seen significant developments in research synthesis, starting from within healthcare and migrating across a large number of disciplines and fields.
- ‘Systematic’ is a requirement for any type of research, so a literature review should not be any different from this standard.
- Systematic approaches are used to reduce the potential for bias within a review.
- The main types of review can be defined by the extent to which they harness the Search, Appraisal, Synthesis and Analysis (SALSA) elements.

INTRODUCTION

Fink (2005) succinctly defines a literature review as a ‘systematic, explicit, and reproducible method for identifying, evaluating, and synthesising the existing body of completed and
recorded work produced by researchers, scholars, and practitioners'. Particularly noticeable is the word ‘systematic’, key to the title and content of this book. All reviews share the requirement of original empirical research, namely to be systematic. Different types of review (see Box 2.1) should differ only in the degree to which they are systematic — according to each review’s role and function — and each type should help by telling you what exactly they have and have not done.

![Box 2.1](image)

**Some common types of review**

- Critical review
- Integrative review
- Literature review
- Mapping review/systematic map
- Meta-analysis
- Mixed studies review/mixed methods review
- Overview
- Qualitative systematic review/qualitative evidence synthesis
- Rapid review
- Realist synthesis
- Scoping review
- State-of-the-art review
- Systematic review
- Systematic search and review
- Systematised review
- Umbrella review

(Note: These different types of review are defined and explained later in this chapter. For the present we acknowledge a plethora of terms for systematic approaches to a literature review.)

Hart (1998) unpicks the detail of the review process, focusing on the essential components, the documents themselves:

> the selection of available documents ... on the topic ... written from a particular standpoint to fulfil certain aims or express certain views on the nature of the topic and how it is to be investigated, and the effective evaluation of these documents in relation to the research being proposed.
To perform this effectively you need processes to ensure that you complete this task in an efficient manner and fulfil it to the right quality. By ‘quality’ we mean ‘appropriate breadth and depth, rigor and consistency, clarity and brevity, and effective analysis and synthesis’ (Hart, 1998).

WHY IS THE LITERATURE REVIEW SO IMPORTANT?

Bem (1995) notes that ‘authors of literature reviews are at risk for producing mind-numbing lists of citations and findings that resemble a phone book – impressive case, lots of numbers, but not much plot’. When we make decisions based on evidence it makes sense to use the best that is available. By and large the best evidence for many decisions comes from a systematic review of all the evidence. Mulrow (1995) argues that reviewing in this way is a search for the whole truth, rather than just one part of it, and is thus a ‘fundamentally scientific activity’. The reviewer uses a specific and reproducible method to identify, select and appraise studies of a previously agreed level of quality (either including all studies or only those that pass a minimum quality threshold) that are relevant to a particular question. The results of the studies are then analysed and summarised. Synthesising evidence helps us to find out what we know and don’t know about what works and what doesn’t work. A good research synthesis can generally give us the most trustworthy answer to a specific review question, and it can identify gaps in our knowledge that require further research. It also communicates the strength of the available evidence and the quality of included studies, thereby indicating how much confidence practitioners, service users, managers, policy makers, and the popular media should have in the results.

A research synthesis can also help us to find out how well a policy, programme, technique or intervention works in different subgroups of users and inform us about its potential to cause harm. Some research syntheses shed light on the pros and cons of different ways of organising or delivering services or policies. A research synthesis that includes considerations of cost can help shape our judgements about whether a chosen policy or course of action provides good value for money.

Yet another reason to synthesise the results of different studies of a given intervention is to learn whether findings are consistent across multiple studies. Light and Pillemer (1984) write that ‘disagreements among findings are valuable … [and that] conflicts can teach us a lot’. Thus we can identify settings in which a particular social policy might succeed, circumstances under which an educational programme might work best, or which dose of a drug is most effective.

A good research synthesis frequently highlights weaknesses in the evidence and argues for further research. What should service users, policy makers and others decide in the absence of evidence? Even when a research synthesis shows strong, unambiguous evidence to support one course of action, ‘politics’ may make that review’s findings less influential than well-coordinated lobbying. As Chalmers and colleagues (2002) observe, ‘Research synthesis sometimes yields unwelcome results that challenge strongly held opinions and other vested interests’. Yet even if the recommendations from a research synthesis are disregarded, its very existence encourages more transparency about the role of other factors in decision making. No matter how well they are done, research syntheses are not a panacea for all problems, but they do offer a valuable aid to decision making.
Literature reviews are pervasive in academia and policy development. However, a literature review is typically showcased in three particular contexts:

1. As a major component of a dissertation, thesis or other academic deliverable.
2. As a peer-reviewed publication, typically in a journal or, depending upon the discipline, as a book chapter.
3. As a report resulting from a funded research project or other commissioned research or consultancy.

Each of these contexts shapes the final review product. For example, a literature review as part of a dissertation or thesis should be innovative. A student should be reflexive about their methods (McGhee et al., 2007) and demonstrate their personal growth through the methodology (Daigneault et al., 2014). Students are expected to demonstrate their ‘knowledge about a particular field of study, including vocabulary, theories, key variables and phenomena, and its methods and history’ (Randolph, 2009). Furthermore a student must demonstrate that they are sensitised to the ‘influential researchers and research groups in the field’. Of course a literature review from a thesis may subsequently become a ‘legitimate and publishable scholarly document’ (LeCompte et al., 2003).

In producing a peer-reviewed publication the reviewer faces the challenge of squeezing a wealth of data into the tight constraints of a journal’s house style and word limits, occasionally overflowing into online supplementary materials. Journals, and their parent disciplines, demonstrate very different approaches to handling reviews. Some journals will not even consider review articles. In contrast, other journals celebrate annual review-type commissioned overviews and literature surveys.

Finally if you are reviewing the literature for a funded research project or for consultancy you may face tight time constraints, a demand for answers rather than issues, and readers who want to sidestep the methodology and cut straight to the results or findings. Systematic reviews can yield:

- information about the nature and extent of a problem, and the potential benefits, harms, uncertainties, and costs of interventions and policies. Policymakers may also want to know about the impact on different groups in various settings ... [and to] answer questions about how best to disseminate information and innovations; ... whether the interventions are appropriate to local culture and context; and about the factors influencing study outcomes. (Sweet and Moynihan, 2007)

Chapter 10 acknowledges that different types of presentation suit different audiences and purposes. For the moment, we distinguish between reviews for knowledge support and those for decision support (Mays et al., 2005; Pope et al., 2007). Reviews for knowledge support summarise and synthesise research evidence (focusing on what currently exists and is known about a topic). They may highlight gaps in the evidence base as a target for future research, just as a thesis might do. Reviews for decision support go further in bringing the existing evidence to bear on a particular issue or problem. Gaps in the evidence base lead to the supplementary question ‘... and what shall we do about this issue or problem in the meantime?’ Unsurprisingly,
Lavis and colleagues (2005) found that managers are interested in reviews that help them to decide whether to start, stop or change a programme, how to accommodate new programmes or services – tried elsewhere – within their own organisation, and how to bring about change.

The knowledge support–decision support spectrum is often caricatured within healthcare by the Cochrane Review at one end and the health technology assessment at the other. In actuality, Cochrane reviews increasingly strive to contribute to decision making while health technology assessments look beyond the immediate problem to recommend future commissioned primary research.

**WHAT TYPES OF RESEARCH QUESTION ARE SUITABLE FOR LITERATURE REVIEW?**

It is essential that a literature review is question-led. The question, along with the purpose of the review, the intended deliverables and the intended audience, determines how the data are identified, collected and presented. Some conclude that a literature review is only useful where a significant body of literature is already known to exist. However, even if a researcher believes that they are the first to examine a particular intervention, policy or programme they should confirm this from the previously published literature. Thus they avoid presenting ‘islands without continents’ (i.e. falsely claiming innovation) (Clarke and Chalmers, 1998). Cross-fertilisation of methods from a related field may similarly save a researcher from having to develop a solution from scratch.

Although you might well be the first to consider a particular issue most literature reviews assume that at least one other researcher has at least considered, if not addressed, your question. Your question is shaped and influenced by the goal and focus of the review (Hart, 1998; Randolph, 2009):

- **Effectiveness questions:** What effect does intervention X, compared with intervention Y, have on outcome Z? What are the relative cost-benefits of X versus Y?
- **Methodology questions:** What research methods have previously been used to investigate phenomenon X? What are the respective strengths and weaknesses of such methods?
- **Conceptual questions:** How has phenomenon X been identified and defined? Which theories have been used to explain phenomenon X? Which theory provides the best fit to findings from empirical studies? What are the main unresolved controversies? What are the underpinning epistemological and ontological foundations for the discipline?

**WHY REVIEW THE LITERATURE?**

The internet age has witnessed the so-called information explosion (Major and Savin-Baden, 2010). With increasing numbers of articles being published and improved open access to many of these articles, it is becoming almost impossible to navigate even the more specialised subject domains. At an individual level we face information overload. We are overwhelmed by the volume of information we encounter and unable to retrieve the information we need. Is there a solution to this situation? One possible approach is to become information literate – put
simply this means acquiring the skills covered in Chapters 5 to 10 in this book that will allow us to locate, evaluate and use information effectively.

Although technologies are always changing, database interfaces and search engines are continually being upgraded, and new topics emerge with regularity, the skills of information literacy you acquire during your literature review will equip you beyond the duration of your project or dissertation and throughout your career and working life.

Many authors agree on the purposes of a literature review (see Box 2.2), irrespective of discipline (Cooper, 1989; Bruce, 1994, 1996; Hart, 1998; Galvan, 1999).

**Box 2.2**

**Purposes for a literature review**

- To place each work in the context of how it contributes to an understanding of the subject under review.
- To describe how each work relates to the others under consideration.
- To identify new ways to interpret, and shed light on gaps in, previous research.
- To identify and resolve conflicts across seemingly contradictory previous studies.
- To identify what has been covered by previous scholars to prevent you needlessly duplicating their effort.
- To signpost the way forward for further research.
- To locate your original work within the existing literature.

Which of the above points most accurately capture your reason(s) for conducting a literature review?

Your reasons may include ‘taking stock’ of what has gone before and identifying a niche for your own research. The literature may help you design your own research. You may identify a theory against which you will explore a specified hypothesis. You may need to select tools, instruments or scales to help you conduct your research. You may seek to identify gaps that offer opportunities as future research questions. Reasons for reviewing the literature are mirrored within the following brief history of research synthesis.

**A BRIEF HISTORY OF RESEARCH SYNTHESIS**

Research synthesis can have no absolute start date. Very early on in history humankind needed to record what had previously occurred, to compare experiences across cases, and to build up a knowledge base of what was now known and what remained unknown. Those who chronicle research synthesis typically identify specific landmarks (see Table 2.1) and then link these with a dotted non-continuous line.

Probably the most cited account originates from three eminent proponents, Chalmers, Hedges and Cooper (2002), in ‘A brief history of research synthesis’. A more extensive treatment of the
same topic is available in *The Handbook of Research Synthesis and Meta-analysis* (Cooper et al., 2009). Both works attest to the fact that research synthesis has migrated from a select number of disciplines to pervade almost every area of academic activity.

There is nothing particularly novel about research synthesis. In 1753, James Lind, the Scottish naval surgeon who was instrumental in the first **randomised controlled trial**, recognised the value of systematic methods for identifying, extracting and appraising information from individual studies as a protection against a biased interpretation of research:

> As it is no easy matter to root out prejudices ... it became requisite to exhibit a full and impartial view of what had hitherto been published on the scurvy ... by which the sources of these mistakes may be detected. Indeed, before the subject could be set in a clear and proper light, it was necessary to remove a great deal of rubbish. (James Lind, cited in Dunn, 1997)

Gathering the published research, getting rid of the rubbish, and summarising the best of what remains characterises the science of research synthesis. Subsequent developments in **information retrieval**, documentation and document delivery have made it considerably less of a challenge to identify, acquire and interpret the scattered body of published and unpublished research.

Others trace the origins of research synthesis to seventeenth-century astronomers who combined data from related studies to introduce greater precision to their individual observations (Petticrew, 2001). However, a more obvious heritage lies with statistician Karl Pearson who identified the need to bring together multiple small studies to arrive at a definitive opinion of the evidence on inoculations against fever (Pearson, 1904). Three years later, Joseph Goldberger, a scientist in the United States, reviewed 44 studies of typhoid fever and then abstracted and pooled data from 26 of the 44 studies (Chalmers et al., 2002).

Similar work was undertaken within agriculture by Ronald Fisher and colleagues in the 1930s. However, it was not until the 1970s that formal procedures for synthesising studies were labelled as **meta-analysis** by Gene Glass (1976) and other social science colleagues.

### Table 2.1 Milestones in the history of research synthesis

<table>
<thead>
<tr>
<th>Date</th>
<th>Milestones</th>
</tr>
</thead>
<tbody>
<tr>
<td>1753</td>
<td>James Lind published first ‘systematic review’</td>
</tr>
<tr>
<td>1904</td>
<td>Pearson published landmark review on effects of vaccines against typhoid</td>
</tr>
<tr>
<td>1976</td>
<td>Glass coined term ‘meta-analysis’</td>
</tr>
<tr>
<td>1984</td>
<td>Light and Pillemer, <em>Summing Up</em></td>
</tr>
<tr>
<td>1987</td>
<td>Mulrow, ‘The medical review article: state of the science’</td>
</tr>
<tr>
<td>1989</td>
<td>Enkin and colleagues, <em>Effective Care in Pregnancy and Childbirth</em></td>
</tr>
<tr>
<td>1992</td>
<td>Antman and colleagues illustrated value of cumulation of findings</td>
</tr>
<tr>
<td>1993</td>
<td>Launch of Cochrane Collaboration</td>
</tr>
<tr>
<td>1994</td>
<td>Establishment of the UK NHS Centre for Reviews and Dissemination</td>
</tr>
<tr>
<td>2000</td>
<td>Founding of Campbell Collaboration</td>
</tr>
</tbody>
</table>
In 1984 Light and Pillemer published *Summing Up: The Science of Reviewing Research*, arguing that new methods of research synthesis applied to many fields, including health, education and psychology:

> Without a clear picture of where things stand now, simply adding one new study to the existing morass is unlikely to be very useful ... For science to be cumulative, an intermediate step between past and future research is necessary: synthesis of existing evidence. (Light and Pillemer, 1984)

Three years later, Mulrow (1987) delivered a damning verdict on 50 ‘review or progress articles’ published in four leading medical journals. Only one of the 50 reviews ‘had clearly specified methods of identifying, selecting, and validating included information’. She concluded that ‘Current ... reviews do not routinely use scientific methods to identify, assess, and synthesize information’. On the contrary, these reviews are often ‘subjective, scientifically unsound, and inefficient’ (Mulrow, 1987). Towards the end of the 1980s Iain Chalmers and colleagues responded to this challenge (Enkin et al., 1989), laying a platform for collaborative synthesis, from which the **Cochrane Collaboration**, and its sibling the **Campbell Collaboration**, were launched.

At about the same time Oxman and Guyatt concluded from a survey of published reviews that:

> Our data suggest that experts, on average, write reviews of inferior quality; that the greater the expertise the more likely the quality is to be poor; and that the poor quality may be related to the strength of the prior opinions and the amount of time they spend preparing a review article. (Oxman and Guyatt, 1993)

As **evidence-based policy** and **evidence-based practice** became popular in the 1990s other disciplines, such as education, started to acknowledge the importance of research syntheses (Evans and Benefield, 2001). Not everyone welcomed such a trend (Hammersley, 2001). Nevertheless, evidence-based policy and practice gained pace in other fields such as social care and management (see, for example, Davies et al., 2000; Trinder and Reynolds, 2000). Governments also began to fund initiatives to support research syntheses, particularly systematic reviews (Davies, 2000).

Many other organisations began producing research syntheses during the 1990s. Funding bodies began to require a systematic review of existing research before considering applications for funding a primary study. The UK Medical Research Council requires a researcher to demonstrate that a systematic review has been undertaken before it will commission a new trial (Clark and Horton, 2010). This ensures that the question has not already been answered, and that the results of previous research are used in designing the new trial.

Subsequent years have been characterised by the increasing popularity of literature review variants and derivatives, often within time-constrained policy windows and requiring a flexible toolkit of ‘systematic approaches’. More than anything the proliferation of so many variants emphasises that the extent to which a review is systematic lies on a continuum running from brief **evidence summary** through to **gold standard** systematic review.
WHAT IS THE PLACE OF THEORY IN LITERATURE REVIEW?

For Webster and Watson a successful literature review:

- creates a firm foundation for advancing knowledge. It facilitates theory development, closes areas where a plethora of research exists, and uncovers areas where research is needed. (Webster and Watson, 2002, emphasis added)

Initially theory was considered an unwelcome distraction from the fundamentally pragmatic intent of the science of research synthesis. Pragmatic disciplines such as health services research are largely atheoretical – at least in the sense of not acknowledging a specific theoretical contribution. As you move outwards to contiguous disciplines such as public health, health promotion and nursing, theory is more plentiful. This is similarly the case for such disciplines as social care, education, management, and even information systems. A more complex panorama is emerging, particularly within the context of understanding how complex interventions might be understood to work (De Silva et al., 2014). Reviews may be broadly characterised as generating, exploring or testing theory (Gough et al., 2012).

Review techniques may range from the hypothesis testing of meta-analysis through to use of interpretive techniques such as meta-ethnography and critical interpretive synthesis. Other techniques such as realist synthesis explore the application of mid-range programme theory to a mix of quantitative and qualitative data. Furthermore concept analysis explicitly seeks to define, expand and extend the theoretical underpinnings of a target concept, and may prove a useful starting point for a review where definitions are contested.

Literature reviews offer multiple opportunities to engage and interact with theory (see Table 2.2). Methods for searching the literature for theory in a systematic way are beginning to be proposed (Booth et al., 2013b; Booth and Carroll, 2015). An evidence synthesis may scope out theories relating to a particular issue (Campbell et al., 2014) or seek to consolidate current theory, creating a ‘meta-model’. Alternatively a literature review can be used to generate new, overarching theories and interpretations (Campbell et al., 2014). Subsequently, the literature may offer a data set against which existing theories can be examined and modified. Finally, where a literature review is unable to fully explain differences that exist between apparently similar mechanisms or contexts, a reviewer may introduce theory in an attempt to analyse such differences.

THE TRADITIONAL NARRATIVE REVIEW, THE SYSTEMATIC REVIEW AND ‘SYSTEMATIC APPROACHES’

All research, literature reviews included, is required to be ‘systematic’ in its conduct, analysis and/or presentation:

Who would want reviews to be unsystematic, if by ‘systematic’ we mean no more than ‘properly carried out, taking account of all the relevant evidence, and making reliable judgements about its validity and implications’? On this definition, to produce a systematic review is simply to do the job of reviewing well. (Hammersley, 2002)
<table>
<thead>
<tr>
<th>Type of review</th>
<th>Reference</th>
<th>Interplay of literature review and theory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creation of meta-model</td>
<td>Fostering implementation of health services research findings into practice: a consolidated framework for advancing implementation science (Damschroder et al., 2009)</td>
<td>Used snowball sampling approach to identify published theories and component constructs. Combined constructs across published theories while removing redundancy or overlap. Created Consolidated Framework for Implementation Research (CFIR) as overarching typology for implementation theory development.</td>
</tr>
<tr>
<td>Meta-ethnography</td>
<td>Using meta-ethnography to synthesise qualitative research: a worked example (Britten et al., 2002)</td>
<td>Four papers about lay meanings of medicines arbitrarily chosen. Used Noblit and Hare’s seven-step process for meta-ethnography (1988). Six key concepts were derived from interpretations in chosen papers and four reviewer interpretations were constructed to make sense of these. Produced middle-range theories as hypotheses to be tested by other researchers.</td>
</tr>
<tr>
<td>Meta-narrative review</td>
<td>Storylines of research in diffusion of innovation: a meta-narrative approach to systematic review (Greenhalgh et al., 2005)</td>
<td>Identified 13 key meta-narratives from literatures of rural sociology, clinical epidemiology, marketing and organisational studies. Researchers in different traditions had conceptualised, explained and investigated diffusion of innovations differently. Reconciled seemingly contradictory data, systematically exposing and exploring tensions between research paradigms.</td>
</tr>
<tr>
<td>Realist review (to complement an effectiveness review)</td>
<td>Realist review to understand the efficacy of school feeding programmes (Greenhalgh et al., 2007)</td>
<td>Complemented existing Cochrane Review by exploring detailed information on context, mechanisms, and outcomes of interventions and theories in 18 trials of school feeding programmes.</td>
</tr>
<tr>
<td>Review of theories</td>
<td>Healthcare professionals’ intentions and behaviours: a systematic review of studies based on social cognitive theories (Godin et al., 2008)</td>
<td>Reviewed literature on factors influencing health professionals’ behaviours based on social cognitive theories: 78 studies met inclusion criteria. Most used theory was Theory of Reasoned Action or its extension Theory of Planned Behaviour.</td>
</tr>
<tr>
<td>Review of use of theory</td>
<td>A systematic review of the use of theory in the design of guideline dissemination and implementation strategies and interpretation of the results of rigorous evaluations (Davies et al., 2010)</td>
<td>Reviewed use of theory in 235 evaluations of guideline dissemination and implementation studies (1966-1998). Classified theory according to type of use (explicitly theory based, some conceptual basis, and theoretical construct used) and stage of use (choice/design of intervention, process/mediators/moderators, and post hoc/explanation).</td>
</tr>
<tr>
<td>Scoping review</td>
<td>Disseminating research findings: what should researchers do? A systematic scoping review of conceptual frameworks (Wilson et al., 2010)</td>
<td>Searched 12 electronic databases to identify/describe conceptual/organising frameworks used in guiding dissemination activity. Narrative synthesis undertaken: 33 frameworks met inclusion criteria underpinned by three theoretical approaches (persuasive communication, diffusion of innovations theory and social marketing).</td>
</tr>
<tr>
<td>As precursor to conceptual work</td>
<td>The place of the literature review in grounded theory research (Dunne, 2011)</td>
<td>Explored the role literature review can play in grounded theory methodology.</td>
</tr>
</tbody>
</table>
However, reviewers have not always recognised this fact, as illustrated by our hypothetical recipe for a traditional literature review:

Take a simmering topic, extract the juice of an argument, add the essence of one filing cabinet, sprinkle liberally with your own publications and sift out the work of noted detractors or adversaries.

Greenhalgh (2014) describes journalistic reviews of college students where, if research did not fit with their proposed theory, material is simply left out. Bias, or systematic error, may exist at the identification, selection, synthesis, analysis and interpretation stages of a review process which may demonstrate ‘implicit, idiosyncratic methods’ (Mulrow et al., 1997). Frequently the much maligned narrative review (Mulrow et al., 1997; Greenhalgh, 2014) is referred to as a ‘traditional review’, ‘conventional review’, or even more damningly, as a ‘non-systematic review’. However, some non-systematic reviews openly ally themselves to different traditions of reviewing literature. Consequently a review can be poorly conducted, poorly reported, or both (Shea et al., 2002).

WHY BE SYSTEMATIC?

While many arguments are advanced for the desirability of systematic approaches to reviewing the literature, we have identified at least three principal considerations, i.e. clarity, validity and auditability.

Many systematic approaches target the clarity of scholarly communication. The structure of a systematic review makes it easier to navigate and interpret. Clear methodology makes it easier to judge what the reviewers have and have not done. A focused question and explicit search strategies help to clarify scope and terminology. Stated inclusion and exclusion criteria allow readers to recognise why particular articles known to them have not been included. Graphical, textual and tabular features combine to reveal rather than conceal.

A second consideration addresses internal validity. The review product must be defensible against potential bias (see Chapter 8). Potential biases include selection bias where a reviewer selects primary research studies that support his/her prior beliefs. Biases also include publication bias (where investigators, reviewers or editors differentially submit or accept manuscripts based on the direction or strength of the study findings) (Gilbody and Song, 2000). Systematic approaches require that items are selected for inclusion on the basis of their relevance and rigour, not on whether they report a favourable outcome or whether their results are intrinsically ‘interesting’.

Finally an emphasis on transparency leads to concerns with auditability – how do we know that the reviewer’s conclusions are grounded in the data retrieved from the review process and not an argument fabricated to support a prior conclusion?

Systematic research syntheses are important, too, as quality control. Peer-review serves more as a check on a primary study’s published report. The original data themselves seldom are subject to scrutiny. (Rousseau et al., 2008)

The science of research synthesis is thus populated by flowcharts of numbers of included studies, supplementary documents, and appendices relating to search strategies, sample data extraction forms, and increasing numbers of reporting standards (Moher et al., 2014).
How systematic is this review?

Disciplines differ in the extent to which they have adopted systematic approaches to research synthesis. Identify a review article within your own subject area or discipline. (For example, search for ‘review’, ‘overview’, or ‘meta-analysis’ in the title or abstract.) To what extent can your chosen review be described as ‘systematic’? Exercise 2.1 suggests that you construct a grid as in the following example and complete it with your own observations.

<table>
<thead>
<tr>
<th>Features that make this review appear SYSTEMATIC</th>
<th>Features that make this review appear NON-SYSTEMATIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explicit</td>
<td>Creative</td>
</tr>
<tr>
<td>Transparent</td>
<td>Comprehensive</td>
</tr>
<tr>
<td>Methodical</td>
<td>Imaginative</td>
</tr>
<tr>
<td>Objective</td>
<td>Publishable</td>
</tr>
<tr>
<td>Standardised</td>
<td>Stimulating</td>
</tr>
<tr>
<td>Structured</td>
<td>Topical</td>
</tr>
<tr>
<td>Reproducible</td>
<td>Well-written</td>
</tr>
<tr>
<td>Either</td>
<td>Implicit</td>
</tr>
<tr>
<td>Unsystematic</td>
<td>Opaque</td>
</tr>
<tr>
<td>Creative</td>
<td>Whimsical</td>
</tr>
<tr>
<td>Imaginative</td>
<td>Subjective</td>
</tr>
<tr>
<td>Publishable</td>
<td>Variable</td>
</tr>
<tr>
<td>Stimulating</td>
<td>Chaotic</td>
</tr>
<tr>
<td>Topical</td>
<td>Idiosyncratic</td>
</tr>
</tbody>
</table>

Briefly reflect on what the term ‘systematic’ means to you. Do you consider being systematic a positive or a negative attribute? Table 2.3 suggests some words associated with being systematic or unsystematic.

Table 2.3 Words associated with being ‘systematic’ or unsystematic

The availability of time, personnel and money may further constrain the quality of the final review product (see Chapter 4). A reviewer should select a model of review that is most appropriate to the purpose required (Tricco et al., 2011; Kastner et al., 2012). The reviewer should be explicit about any limitations inherent to the chosen approach. For example, a scoping review that offers a snapshot of a particular topic (Arksey and O’Malley, 2005) does not usually attempt quality assessment. In contrast, systematic reviews (or overviews): use (and describe) specific, explicit and therefore reproducible methodological strategies to identify, assemble, critical appraise and synthesise all relevant issues on a specific topic. (Carney and Geddes, 2002)

Well-conducted systematic reviews should improve the reliability and accuracy of conclusions, being clearly allied to the scientific method:
Syntheses systematically identify where research findings are clear (and where they aren’t), a key first step to establishing the conclusions science supports. (Rousseau et al., 2008)

The results of systematic reviews are rarely unequivocal and require careful reading and interpretation (Hopayian, 2001). Narrative reviews often offer a ‘snapshot’ of prevalent knowledge at a particular point in time whereas many systematic reviews explicitly aim to monitor and capture incident (i.e. emerging) knowledge. Systematic reviews may be designed to be updated periodically to take into account the emergence of new evidence. Cooper (1988a, 1988b) identifies four possible literature review approaches:

1) Exhaustive coverage, citing all relevant literature.
2) Exhaustive coverage with selective citation.
3) Representative coverage (discussion of works which typify particular groupings in the literature).
4) Coverage of pivotal works.

Cooper’s choice of **exhaustivity** – often considered synonymous with the ‘systematic review’ – is to be preferred to the discourse of ‘comprehensiveness’, because the former carries the implication of finite (i.e. review-dependent) resources. Early on in the development of the systematic review process it was considered desirable to retrieve all studies on a clearly defined topic. Rousseau and colleagues (2008) state:

Systematic means **comprehensive accumulation**, transparent analysis, and reflective interpretation of all empirical studies pertinent to a specific question. Reliance upon any sampling or subset of the literature risks misrepresenting its diversity in findings, outcomes methods, and frames of reference.

More recently there is increasing recognition that even the most exhaustive (and exhausting!) search cannot hope to identify the entire universe of studies on the most specific of topics. Interestingly Cooper’s third and fourth approaches broaden our toolkit to include a wider range of sampling approaches, increasingly recognised as a more appropriate response than a ‘one-size-fits-all’ comprehensive approach (Suri, 2011). ‘Fitness for purpose’ is the appropriate aspiration, underpinned by the trade-off of rigour versus relevance (Bennett et al., 2005). Notably, however, selective citation – a danger inherent in the second of Cooper’s approaches – is regarded as a potential source of bias (Song et al., 2010). Exercise 2.2 asks you to compare a systematic review with a traditional review.

**exercise 2.2**

**Compare a systematic and a traditional review**

Identify a systematic review in an area of interest to you and also identify a conventional review in a similar or related topic. Place the two reviews side by side and briefly make a list of the differences between the two reviews.
Clarification of terminology

Up to now we have used the umbrella term ‘research synthesis’ unless specifically referring to a particular type of review. Many authors have attempted a taxonomy of literature review types (Strike and Posner, 1983; Cooper, 1988a, 1988b; Grant and Booth, 2009; Gough et al., 2012; Paré et al., 2014; Whittemore et al., 2014). Such a task is challenging because a review may be characterised across such variables as the purpose of the review (as with a mapping review), the types of included study (as with a systematic review of randomised controlled trials), the nature of included data (as with the qualitative systematic review), the type of question being addressed (as with the effectiveness review), the phenomenon being investigated (as in the case of meta-theory or meta-method), and the underlying intent (meta-ethnography for theory generation or realist synthesis for theory verification). Other characteristics relate to the context of the review (as for the rapid evidence assessment) or to the underpinning ‘philosophy’ regarding subsequent use of the review (as with best evidence synthesis). This book will attempt to define the characteristics of each type of review wherever possible. However, we would also acknowledge that:

Only a handful of review types possess prescribed and explicit methodologies and many of the labels used fall short of being mutually exclusive … [we recognise] that there is a lack of unique distinguishing features for the most common review types, whilst highlighting that some common features do exist. (Grant and Booth, 2009)

Researchers have a considerable incentive to invent a new label or new form of review that differs slightly from its predecessors rather than to seek standardisation. In Chapters 4 to 10 we focus on the techniques and ingredients of the review process (systematic approaches) as a counter balance to methodological ‘pigeon-holing’.

Recently approaches to the synthesis of the literature have been characterised as either aggregative or interpretive/configurative (Weed, 2005; Gough et al., 2012; Sandelowski et al., 2012) (see Table 2.4). Aggregative reviews bring together studies on a similar topic such that each additional study adds ‘weight’ to a shared finding. Bringing studies together in this way necessitates assumptions about how similar studies are to one another (homogeneity). In practice all studies are different (with regard to the population studied, in how a procedure is implemented, in how an outcome is measured, etc.). The reviewer, and indeed the reader, have to judge whether studies are more alike than different.

By implication aggregative approaches can reach a point at which sufficient studies have established a finding beyond statistical doubt. Cumulative meta-analyses can demonstrate a point beyond which subsequent studies possess a certain degree of informational redundancy (Antman et al., 1992). Nevertheless, in theory at least, additional studies hold the potential to overturn a previous finding. Aggregative reviews therefore represent an ongoing attempt to identify studies that have previously been missed, particularly if their absence might reveal a previously neglected systematic bias.

In contrast, interpretive/configurative reviews seek to broaden our understanding of a particular intervention or phenomenon. Each study holds the potential to contribute additional insights and also contribute to the overall picture. Of course this potential is more limited where a broad consensus exists and authors report the same type of insights. This is analogous to theoretical saturation within primary research (Dixon-Woods et al., 2005). In theory, theoretical saturation should be less frequent than in primary research as, unlike interviewees, authors are not independent informants (Dixon-Woods et al., 2006). Indeed authors
are incentivised to report innovative insights. To resists theoretical saturation a reviewer will make particularly strenuous attempts to sample from other fields or types of literature. Whereas aggregative reviews implicitly value the average result which adds strength to the overall result from multiple similar studies, interpretive reviews place particular value on identifying the disconfirming case (Booth et al., 2013a). Interpretive reviews often seek to contribute to theory (Walsh and Downe, 2005).

Occasionally the integrative review is used synonymously with the interpretive review. While this terminology was appropriate for as long as quantitative and qualitative reviews were separate endeavours, the mixed methods review now seeks to ‘harness the power of stories alongside the power of numbers’ (Pluye and Hong, 2014). We reserve the integrative review for cases where both types of data are brought together (Whittemore and Knafl, 2005), typically to produce a whole that is greater than the sum of its parts (Strike and Posner, 1983).

**Table 2.4** Configurative/interpretive or aggregative?

<table>
<thead>
<tr>
<th>Configurative/Interpretive</th>
<th>Aggregative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Will my question develop and change as new insights emerge from the literature?</td>
<td>Is my question fixed and focused, allowing me to decide authoritatively whether studies are relevant or not?</td>
</tr>
<tr>
<td>If new papers fail to contribute new insights will I purposively move on to different types of sources?</td>
<td>Will I keep searching until I have exhausted all likely sources?</td>
</tr>
<tr>
<td>Is the main value of each new study in adding a different insight to what I am investigating?</td>
<td>Is the main value of each new study in adding weight to, or confirming, what has previously been found?</td>
</tr>
<tr>
<td>Is my principal focus on the ‘exception to the rule’?</td>
<td>Is my principal focus on the mean or ‘average’ overall result?</td>
</tr>
<tr>
<td>Will my data be presented primarily as themes or models with accompanying commentary?</td>
<td>Will my data be presented primarily as tables and graphs with accompanying commentary?</td>
</tr>
</tbody>
</table>

**INTRODUCING THE SALSA FRAMEWORK**

We have chosen to characterise review types against four critical steps in the review process that we embody within the mnemonic SALSA (Search, Appraisal, Synthesis and Analysis) (Grant and Booth, 2009). The strength and quality of each step contribute to the overall ‘signal’ emitted by the review, whereas biases increase the distracting ‘noise’ (Edwards et al., 1998). Thus a **scoping review** is characterised as a broad-brush approach to finding the most notable studies in the field, minimal attempts to evaluate them for quality, a rudimentary attempt at synthesis (perhaps through listing, tabulation or mapping), and an analysis that caricatures the quantity and distribution of the literature. In contrast a gold standard **systematic review**, as endorsed by the Cochrane Collaboration, prescribes an exhaustive search of the literature, checklist-driven quality assessment, complex synthesis using textual, numerical, graphical and tabular methods and sophisticated analysis (for example, for differences between subgroups, the differential effects of study groups, and the likelihood of missing studies). Between these two extremes lie numerous variants with different levels of input at the four key stages (see Table 2.5).
<table>
<thead>
<tr>
<th>Type of Review</th>
<th>Description</th>
<th>Search</th>
<th>Appraisal</th>
<th>Synthesis</th>
<th>Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Critical review</td>
<td>Aims to demonstrate extensive research and critical evaluation of quality. Goes beyond mere description to include degree of analysis and conceptual innovation. Typically results in hypothesis or model.</td>
<td>Seeks to identify most significant items in field.</td>
<td>No. Evaluates by contribution.</td>
<td>Narrative, conceptual, chronological.</td>
<td>Significant component: seeks to identify conceptual contribution to embody existing or derive new theory.</td>
</tr>
<tr>
<td>Integrative review</td>
<td>Utilises broadest type of research review methods to include both experimental and non-experimental research in order to understand more fully a phenomenon of concern. Integrative reviews combine data from theoretical and empirical literature.</td>
<td>Exhaustive search to identify maximum number of eligible primary sources, using two or more strategies. Purposive sampling may be combined with exhaustive search if appropriate.</td>
<td>Reports coded according to quality but not necessarily excluded.</td>
<td>Tabular (matrices, graphs, charts, or networks) usually according to a framework.</td>
<td>Creativity, critical analysis of data and data displays key to comparison and identification of important patterns and themes.</td>
</tr>
<tr>
<td>Literature review</td>
<td>Examines recent or current literature. Can cover wide range of subjects at various levels of completeness and exhaustivity. May include research findings.</td>
<td>Possibly exhaustive.</td>
<td>Possibly.</td>
<td>Narrative.</td>
<td>Chronological, conceptual, thematic, etc.</td>
</tr>
<tr>
<td>Mapping review/systematic map</td>
<td>Maps out and categorises existing literature from which to commission further reviews and/or primary research by identifying gaps in research literature.</td>
<td>As time allows.</td>
<td>No.</td>
<td>Graphical. Tabular.</td>
<td>Characterises quantity and quality of literature, perhaps by study design and other key features. May identify need for primary/secondary research.</td>
</tr>
<tr>
<td>Type of Review</td>
<td>Description</td>
<td>Search</td>
<td>Appraisal</td>
<td>Synthesis</td>
<td>Analysis</td>
</tr>
<tr>
<td>---------------------------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>---------------------------------------------</td>
<td>-----------------------------------------------</td>
<td>------------------------------------------------</td>
<td>----------------------------------------------</td>
</tr>
<tr>
<td>Mixed studies review/ mixed methods review</td>
<td>Combines methods that include review component (usually systematic). Specifically combines review approaches such as quantitative with qualitative research or outcome with process studies.</td>
<td>Sensitive search or separate quantitative and qualitative strategies.</td>
<td>Generic appraisal instrument or separate appraisal processes with corresponding checklists.</td>
<td>Narrative. Tabular. Graphical (to integrate quantitative and qualitative studies).</td>
<td>May look for correlations between characteristics or use gap analysis to identify aspects absent in one literature but missing in other.</td>
</tr>
<tr>
<td>Overview</td>
<td>Surveys literature and describe its characteristics.</td>
<td>Depends on how systematic methods are.</td>
<td>Depends on how systematic methods are.</td>
<td>Depends on how systematic methods are. Narrative. Tabular.</td>
<td>Chronological, conceptual, thematic, etc.</td>
</tr>
<tr>
<td>Qualitative systematic review/ qualitative evidence synthesis</td>
<td>Integrates or compares findings from qualitative studies. Looks for ‘themes’ or ‘constructs’ in or across individual studies.</td>
<td>Selective or purposive.</td>
<td>Typically to mediate messages not for inclusion/exclusion.</td>
<td>Qualitative, narrative synthesis.</td>
<td>Thematic may include conceptual models.</td>
</tr>
<tr>
<td>Rapid review</td>
<td>Assesses what is already known about policy or practice issue.</td>
<td>As time allows, uses systematic review methods to search existing research.</td>
<td>As time allows, uses systematic review methods to critically appraise existing research.</td>
<td>Narrative. Tabular.</td>
<td>Quantities of literature and overall quality/direction of effect of literature.</td>
</tr>
<tr>
<td>Type of Review</td>
<td>Description</td>
<td>Search</td>
<td>Appraisal</td>
<td>Synthesis</td>
<td>Analysis</td>
</tr>
<tr>
<td>----------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------</td>
<td>-------------------------------</td>
<td>-------------------------------</td>
<td>----------------------------------------</td>
<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Realist synthesis</td>
<td>Synthesises large and diverse selection of literature to inform policy revision, design effective interventions and identify potentially effective and innovative interventions.</td>
<td>Mainly iterative and purposive.</td>
<td>Privileges relevance over rigour.</td>
<td>Narrative, causal chains and graphical.</td>
<td>Key output is programme theory/ies of target intervention, specifying how and why programme/service is thought to cause intended outcomes (theory building), and then testing assumptions against further evidence, to strengthen and refine it (theory testing).</td>
</tr>
<tr>
<td>Scoping review</td>
<td>Identifies nature and extent of research evidence (including ongoing research).</td>
<td>As time allows. May include research in progress.</td>
<td>No.</td>
<td>Narrative. Tabular.</td>
<td>Quantity and quality of literature, perhaps by study design and other features. Attempt to specify viable review.</td>
</tr>
<tr>
<td>Umbrella review</td>
<td>Summarises results from systematic reviews on a topic.</td>
<td>Exhaustive search for reviews only.</td>
<td>Possibly using a review specific appraisal tool (for example, AMSTAR).</td>
<td>Graphical and tabular.</td>
<td>What is known and research gaps for primary research or further reviews.</td>
</tr>
</tbody>
</table>

(Adapted from Grant and Booth, 2009)
The SALSA approach is anticipated by other authors: for example, Bruce (2001) specifies that a review requires ‘the analysis and synthesis of previous work in such a manner that new understandings of that work are uncovered, and the way is opened for new scholarship or research’. More recently Major and Savin-Baden (2010) highlighted the importance of synthesis, analysis and interpretation. For us ‘analysis’ fuses the technical aspects of juxtaposing studies with the more imaginative and explorative aspects signified by interpretation.

SYSTEMATIC APPROACHES

By ‘systematic approaches’ we refer to those elements of a literature review that, either individually or collectively, contribute to the methods being both explicit and reproducible. Systematic approaches (see Box 2.3) are evidenced in both the conduct and presentation of the literature review and epitomised in the formal method of ‘systematic review’. Exercise 2.3 asks you to examine how systematic a review is. Specifically systematic approaches include:

- systematic approaches to literature searching, as seen in the scoping review and the mapping review (see Chapter 6);
- systematic approaches to quality assessment (appraisal) of the literature, as seen in an integrative review (see Chapter 7);
- systematic approaches to synthesis of the literature, as seen in such techniques as meta-analysis, meta-ethnography, realist synthesis and thematic synthesis (see Chapters 8 and 9);
- systematic approaches to analysis of the robustness and validity of review findings such as sub-group analysis, either qualitative or quantitative, or sensitivity analysis (see Chapters 8 and 9);
- systematic approaches to the presentation of review findings using narrative, tabular, numerical and graphical approaches (see Chapters 8, 9, and 10).

box 2.3

What does ‘systematic’ look like?
- A priori specification of planned review methods/protocol.
- A clearly focused question.
- Clear, explicit criteria for inclusion and exclusion.
- Documentation of search process: sources and strategies.
- Use of tables and boxes to make methods explicit.
- Use of tables to summarise study characteristics.
- An explicit mechanism to handle quality assessment.
- Exploration of assumptions, limitations and areas of uncertainty.
- Use of tables and graphics to support interpretation of data.
- Appendices including search strategies, sample data extraction and quality assessment tools.
- Explicit Declarations of Interest.
exercise 2.3

How systematic is that review?

Look through the following fictional abstract describing 'a structured review of the literature' in light of what you have already learnt regarding the search, appraisal, synthesis, analysis (SALSA) framework. Which elements of this abstract provide evidence of a systematic approach?

A structured review of the literature

Abstract

(Two brief sentences of Background). A literature search was conducted across (list of Databases and Internet sources) of studies that evaluated X. Information on the type of activity, sample and setting, endpoints, and study design were extracted. Studies were classified based on a modified (Hypothetical Worthy) model. Four categories of activity were identified: actor, decision-support, involvement and systems. The search strategy and selection criteria yielded 21 articles. Eleven studies used an actor activity; two studies used a decision support activity, seven used an involvement activity, and one used a systems intervention. The overall quality of research was uneven: research design – nine studies were quasi-experimental in nature, end-point measures were not consistent – three did not perform statistical analysis. Sample characteristics varied dramatically. In conclusion, the number of high-quality studies of X remains limited. Methodological limitations include measurement of an inappropriate surrogate measure when measurement of an endpoint would be more valid. Further research is needed to understand how each type of activity improves the quality of performing X in a Y setting.

SUMMARY

Like all science, research synthesis is evolving and uncertain. For example, the application of statistical methods for pooling and synthesising the quantitative results of different studies – meta-analysis – is steadily improving, though considerable challenges remain (Egger et al., 2002). While much early development focused on systematic reviews of evidence about healthcare interventions – drugs, therapies, technologies – the principles of research synthesis remain the same regardless of the subject matter under review. This chapter has examined the relative advantages of systematic over more traditional approaches to reviewing the literature. It has identified the main stages in the review process. Systematic approaches to the literature can improve the clarity, validity and auditability of an otherwise well-conducted conventional review. The key steps of search, appraisal, synthesis and analysis (SALSA) can help to characterise the differences between various types of review. Systematic approaches to the literature address three problems neatly encapsulated by Rousseau and colleagues (2008):
the misuse of existing research, the overuse of limited or inconclusive findings, and the under use of research evidence with substantive implications for understanding and working with organisations.

key learning points

- Research synthesis has a long pedigree and in recent years the stimulus of evidence-based policy and practice has seen it spread across multiple fields and disciplines.
- Surveys of research syntheses consistently reveal poor reporting of review methods. All literature reviews should be systematic but reviews differ in the degree to which they are systematic and how explicitly their methods are reported.
- Systematic approaches to the literature attempt to address known deficiencies by offering greater clarity, internal validity and auditability.
- Different types of review can be characterised by the extent to which they undertake the four steps of search, appraisal, synthesis and analysis (SALSA).

frequently asked questions (FAQs)

**FAQ 2.1 Will it always be possible to be systematic in conducting a literature review?**

Yes. We contend that all types of literature review should contain elements of systematicity. Any type of research should access an underpinning ‘system’. The flexibility of the review method allows for different degrees of being systematic. An associated challenge relates to how you describe what you have done, especially where your methods are iterative and recursive. Describing what you looked for, what you found, what you did with what you found, and what you concluded from what you found are shared characteristics of any review. Text, tables and diagrams are different ways to make your review appear more systematic – and your reader will benefit if you are able to communicate what you have done as explicitly as possible.

**FAQ 2.2 If all reviews are ‘systematic’ should I call my review a ‘systematic review’?**

By all means call your review a ‘systematic review’ if you have followed closely a prescribed systematic review methodology, such as outlined by the Cochrane Handbook (Higgins and Green, 2011) or the Centre for Reviews and Dissemination (2009) guidelines. If a review is truly a systematic review then it will carry extra academic weight and likely be more highly cited. However, this label must be earned and not bestowed wantonly. If you call your review a systematic review and this is not the case then it will rightly receive a rough ride from editors, peer reviewers, supervisors and examiners. Choosing the most accurate label for your review will ensure that it is viewed appropriately.

(Continued)
FAQ 2.3 Must a minimum amount of literature exist if I am planning to conduct a literature review?

This depends upon why you are doing your literature review and what your intended audience is expecting. If your review is trying to establish whether a study exists that has previously addressed a specific question then it may be appropriate for you to demonstrate that you have conscientiously combed all likely sources and still not found any eligible study. Alternatively you may need to show that you have looked in the right places by itemising studies that are almost – but not quite – what you were looking for. If your review is required to inform a particular course of action then you may need to drop requirements for particular types of study or literature and widen this to include any source of evidence that matches your review question.

FAQ 2.4 Must the literature be of a particular quality or study type to be included in my literature review?

Again this depends on why you are doing the literature review and what your intended audience is expecting. If your review is trying to establish definitively whether or not a particular intervention works then simply adding inferior study designs or poor quality papers is not going to advance this issue. Only good quality studies will confirm or deny whether the intervention has an effect. In essence you are ‘sieving out’ inferior studies so that only good-enough studies remain. However, if you are seeking an overall (‘all-round’) picture of a phenomenon then even a poor quality study may contain a ‘nugget’ of valuable insight (see Chapter 7).

FAQ 2.5 Do I need to be skilled in statistics if I am planning to conduct a systematic review?

Not necessarily. Systematic reviews can analyse either quantitative literature or qualitative literature, or even combine both types of literature (mixed methods reviews). Generally speaking you should ensure that you have skills in reading and interpreting the type of literature that you intend to review, or plan a route by which you may obtain those skills (such as through reading or training), or identify a resource (for example, a statistician or research support service) that you can access as and when you need this. Bear in mind that not all quantitative reviews are suited to pooling in a meta-analysis. They therefore require numeracy rather than statistics. You should also recognise that your skills in qualitative research are potentially equally important even though these are a less common source of anxiety.

FAQ 2.6 Do I need to include all four steps of search, appraisal, synthesis and analysis in my literature review?

While the time you spend on each step may vary these four steps are fundamental to the review process. For example, even if you only examine a collection of full-text articles stored on your computer, or type some words into Google Scholar, you are conducting a form of ‘search’. Similarly even if you decide to include any type of publication or study on your topic you are making an implicit policy about quality (appraisal) for your review. We would contend that you must describe what you have done for each step and match each step to your review purpose. Frequently analysis, although present, is comparatively neglected when squeezed out by time constraints.
suggestions for further reading

An influential article that outlines why previous narrative approaches to literature review might be considered unsatisfactory.

An accessible introductory overview to the idea of systematic reviews and what they aim to do.

The introductory chapter to a favourite textbook, notable for its clarity and excellent scholarship.

A good starting point if you have yet to be convinced about the value of systematic reviews for your own research.

Based within the more traditional, as opposed to systematic, review paradigm this article nevertheless provides compelling pointers to a high quality literature review.

A concise and understandable guide to the steps of a systematic review

Of historical interest on the development of the Cochrane Collaboration, locating reviews within the broader research-practice gap

REFERENCES


Booth, A., Harris, J., Croft, E., Springett, J., Campbell, F. and Wilkins, E. (2013b) Towards a methodology for cluster searching to provide conceptual and contextual ‘richness’ for systematic reviews of complex interventions: case study (CLUSTER). BMC Medical Research Methodology, 13, 1, 118.


